Ground-up asphalt shingles give you the advantages of asphalt paving but without the cost. An Oregon company came up with the idea.

Recycled shingles can be used to pave farm driveways and feedlots, as well as alleys and walkways around buildings and livestock pens.

Old Shingles Used In Place Of Asphalt Paving

Ground-up asphalt shingles can be used to pave farm driveways and feedlots, says Brent McNeill, Davan Enterprises, Inc., Canby, Oregon.

Davan has been selling recycled shingles for nearly two years now and says results have been excellent.

"It's being used for driveways and parking areas as well as alleys and walkways around buildings and livestock pens. Cattle producers and horsemen like it because it can eliminate muddy areas around waterers and barn doors," says McNeill

Davan gets the shingles from contractors and shingle manufacturers. After all the nails are removed, the waste shingles are processed through a mulch grinder, leaving pieces that range from dust size to 2 in. Areas to be paved should be prepared just the same as for any other roadway or paving material. After the material is spread it's usually compacted with a vibrating roll compactor.

"It compacts well and once in place, doesn't shift or wash away like gravel does," notes McNeill.

When used in muddy livestock areas, they just dump it and let the animals pack it down.

McNeill recommends the ground shingle mix be spread and compacted to 2 in. thick for driveways and parking areas. He says it should be thicker for corrals and pens. "You can use it in all traffic areas, but you probably shouldn't use it where animals will be eating off the ground. Once in place, you get the advantages of asphalt paving but without the cost."

Davan sells the product for $6 per cubic yard at their location in northern Oregon. It weighs 1,475 lbs. per yard. McNeill says there's a minimum load size of 10 yards.

One 10-yd. load, when spread 2 in. deep, will pave about 1,600 sq. ft. That's a 40 by 40-ft. lot, or 160 ft. of a 10-ft. wide driveway.

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"Stream Power" Drives His Home-Built Paddle Pump

In the summer, the main source of water for the 250 plus head of registered Angus cows owned by Orrin Hart and Sons is the creek that flows through their Willabar Ranch near Claresholm, Alberta.

The Harts have a permit to water their cattle from the creek, but they're not thrilled about running cattle to the creek to drink.

"Allowing cattle in the creek pollutes it. It also requires special fencing and maintaining those fences is difficult, since the creek floods occasionally. It's better all around if we can keep the cattle away from it," Orrin says.

Hart has a reputation for using alternative energy wherever he can. In fact, he lives in a solar house, so he hasn't paid a heating bill for 17 years. "We also heat our machine shed with solar panels and generate our own electricity with windmills," he says.

Hart devised a system that uses the power of the flowing water to pump water from the creek to drinking troughs in the adjacent pastures. He's been perfecting what he calls a "floating paddle pump" for several years and thinks his newest version finally has the right combination of paddlewheel design, pump and flotation.

The paddle part of Hart's pump is made from a cylinder he salvaged from an old combine.

He converted the 5-ft. wide cylinder into a large paddle wheel by removing the rub bars and mounting strap iron brackets in their place, bent at an angle. Then he attached strips of heavy corrugated fiberglass roofing sheets to the strap iron braces to make the paddles.

The paddle wheel direct drives using a roller chain instead of a belt. "Belts slip when they get wet and since the paddles tend to throw water, a chain works better," he says.

"The pump we use is designed to pump about 8 gal. per minute running at 500 to 600 rpm's. But the pump runs at only 80 to 100 rpm's when powered by the paddle wheel so it moves only about a gallon a minute. That's more than enough for our needs, though, since it's pumping 24 hours a day," Hart says.

The paddle and pump mount on a skid made of 4 by 4-in. treated wood, with pontoons made of 10-in. dia. PVC pipe, cut 11 ft. long and sealed with end caps. "I glue the end caps in place with PVC cement, and then run a bead of silicone glue around the seam, too. Even a little leak will eventually allow the pontoon to fill with water," he says. "The pontoons give it about 600 lbs. of flotation, but the unit weighs only about 300 lbs. so the pump is very buoyant."

He uses a front-end loader with a fork to set the paddle pump into the creek after the ice goes out in the spring and anchors it with a cable fastened to both rear corners.

Hart's paddle pump pushes water 850 ft. through a 1-in. buried pipe to a reservoir tank about 850 ft. away from the creek. The tank, made of an old industrial tire mounted on a concrete base, holds 800 gal. of water. It supplies water by gravity flow to three drinking tanks in different pastures, also made of industrial tires set on concrete.

Since the paddle pump runs 24 hours a day, it pumps more water than the tank will hold at times. Overflow from the reservoir tank runs through a drain pipe back into the creek.

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Orrin Hart's "floating paddle pump" keeps cattle out of the creek that flows through his ranch by pumping water to a tank 850 ft. away.

Some of the best new ideas we hear about are "made it myself" inventions born in farmers' workshops. If you've got a new idea or favorite gadget you're proud of, we'd like to hear about it. Send along a photo or two, and a description of what it is and how it works. Is it being manufactured commercially? If so where can interested farmers buy it? Are you looking for manufacturers, dealers or distributors? Send to FARM SHOW, P.O. Box 1029, Lakeville, Minn. 55044 or call toll-free 800 834-9665. Or you can submit an idea at our Website at www.farmshow.com.

Mark Newhall, Editor

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